

Abstract of the Disclosure

CATHETER WITH REMOVABLE BALLOON PROTECTOR AND
STENT DELIVERY SYSTEM WITH REMOVABLE STENT PROTECTOR

A balloon catheter is provided having an expandable distal portion and balloon protector means comprising a first removable sleeve having a variable inner diameter to ease sliding the first sleeve over the balloon, and an optional second removable (outer) sleeve positioned over the inner sleeve, the second (outer) sleeve having a constrictive relationship with the first (inner) sleeve, said first and second sleeves being removed prior to use of the catheter. A stent delivery system is provided to facilitate introduction and placement of a stent, and includes a catheter having an expandable distal portion constructed and arranged for expanding the outer diameter of the catheter from a contracted state to an expanded state, said distal portion further comprising a balloon and at least one dam over which the balloon extends, and a stent positioned around the distal portion of the catheter around the balloon or gripper linear control device, said stent having a contracted condition, being sized in the contracted condition to closely surround the balloon in the contracted state, and being expandable to an expanded condition; a first removable (inner) sleeve in the region of the distal portion of the catheter positioned around the stent (and between the dams where the device comprises two dams), said first sleeve comprising a first end, a second end and a variable inner diameter to ease sliding the sleeve over the balloon and stent; an optional second removable (outer) sleeve positioned over the stent, first sleeve and at least one dam, said second (outer) sleeve having a constrictive relationship with the first (inner) sleeve, whereby when compressed by the outer sleeve, the inner sleeve will have an inner diameter approximately equal to or less than the outer profile of the collapsed balloon over the at least one dam, said first and second sleeves being removed prior to use of the stent delivery system and release of the stent by expansion of the balloon.